

## **EXHIBIT B**



CROSS1450

Crossroads Systems, Inc.

INVENTION DISCLOSURE FORM  
PART ONE

1. Title: Give a descriptive title for the Invention. [Example: *Parallel Processing Using Peripheral Device Microprocessors*]

Network analyzer/sniffer with multiple protocol capabilities.

2. Application: What current project or projects at Crossroads does the Invention relate to?

Current development would focus on the Aspen ATM router, but the concepts would be readily agreeable to other company products requiring a routing implementation of one communications protocol to another.

3. Field of the Invention: Give both general and specific descriptions of the field to which the Invention relates. [Example: *This invention relates generally to the field of shared processing computer systems and specifically to the field of small computer system parallel processing using idle microprocessors in peripheral devices.*]

This analyzer device would exist in a typical network environment, specifically in multi-protocol or multi-layered communication data paths that require translation into alternative protocols to other data paths.

NOVELTY. DESCRIBE NEW / UNIQUE FEATURES AND OR FUNCTIONS OF THIS INVENTION.

4. Background: Describe the problem that is to be solved by the Invention. [Example: *Modern small computer systems typically consist of a personal computer and several peripheral devices. Oftentimes, the processing capability of the personal computer is insufficient for a desired processing task, even though additional unused processing power exists in the microprocessors of peripheral devices such as laser printers connected to the personal computer.*]

The analyzer's ability to observe data communications for different communication protocols would be an invaluable tool for product development, the test and verification of numerous communication protocols during the translation process, and also to identify the type of protocols that are currently operational in a network environment.

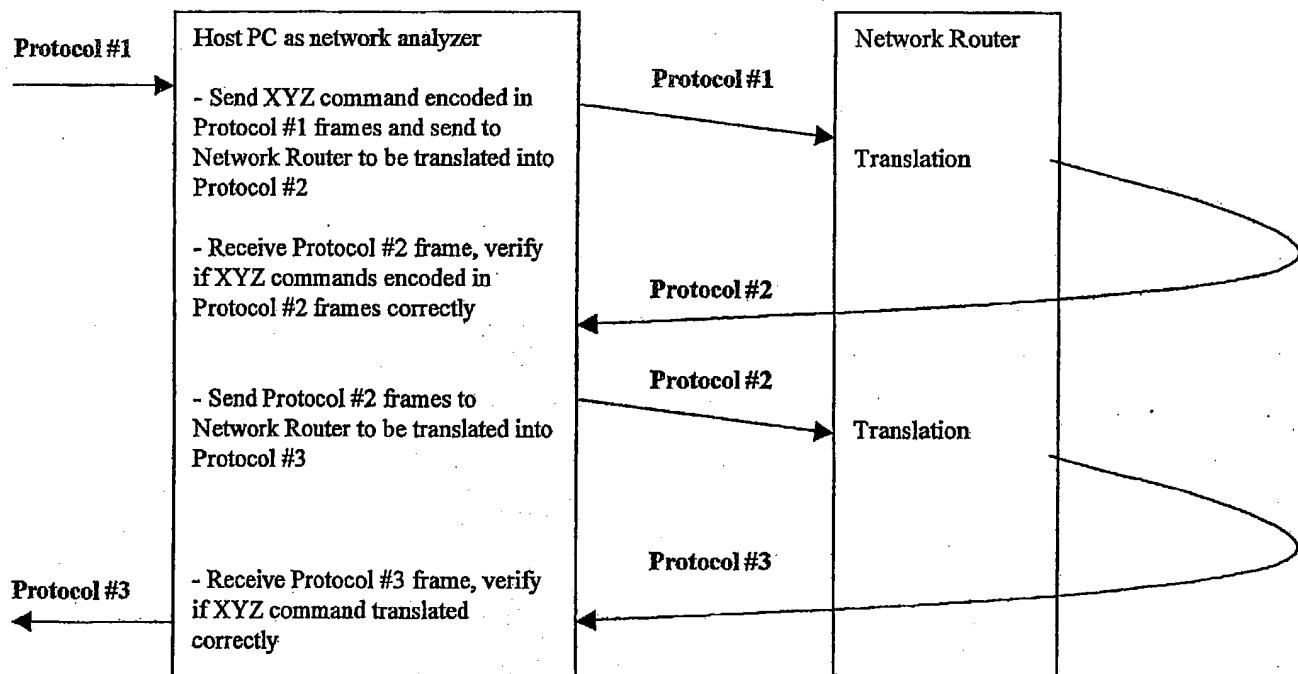
5. Previous Solutions: Describe what solutions to this problem have been tried before, and why they are inadequate. Also describe previous known solutions to similar or related problems. [Example: *One existing method of increasing processing capability is for a networked personal computer to request other connected computers to help process the computer's current task. However, this scheme requires a network of personal computers, assumes that other computers will have excess processing capacity to share, and suffers from slow transfer over network data paths.*]

None

**6. Summary of the Invention:** Describe in clear and simple terms how you solve the problem. Attach block or schematic diagrams, state diagrams, flow charts, or any other graphics that will make the Invention easier to understand. Pay particular attention to what is unique about the Invention. [Example: *The current invention makes use of the fact that personal computers are often connected to peripheral devices having their own microprocessors. In accordance with the invention, a personal computer identifies any attached "smart" peripheral, determines what processing capabilities the peripheral has, and sends data to the peripheral causing it to perform some of the data processing that would otherwise be done by the personal computer. The peripheral is essentially "tricked" into performing this data processing and sending back the results. The invention will be implemented entirely through software.*]

A PC or a scaled down intelligent device with the correct physical interfaces to the communication protocols (Protocol #1, Protocol #2, Protocol #3, etc.) will be used to receive incoming transmissions to the router product and outgoing transmissions from the router product under analysis. The network analyzer will receive Protocol #1, verifies if correct and forward to the routing product. After the routing product has performed the data packet translation into Protocol #2 and sends it out, the analyzer receives it, verifies if correct and forwards to receiving device out on network Protocol #2. Repeat process for Protocols #3 and so on. Any errors will be noted and saved in an appropriate manner.

The goal will be to test each messaging service to verify functionality, translation, error handling, etc. To verify Network Router initiator mode functionality, this configuration is designed with a host PC emulating initiator services to the Network Router initiator node under test. The host PC is also emulating a network sniffer, receiving and identifying network commands before forwarding them to the network router target. Target mode can be tested in reverse order.



**7. Advantages:** How does the Invention create value, whether to an end user, an OEM, or directly to Crossroads? What is the Invention's purpose and practical use? [Example: *Through this invention, the data processing capabilities of existing hardware can be extended by using idle peripheral device microprocessors. Customers can better justify buying a new and expensive printer if they can boost the capabilities of their existing personal computer as well.*]

This invention would directly impact the verification and testing of network router products by measuring the reliability of the translation of a communication protocol to other protocols, isolating data I/O corruption issues within the scope of the router product, and decreasing the time required for product testing.

**8. Disclosure Outside of Crossroads:** Has the Invention been disclosed outside of Crossroads or commercialized (e.g., offered for sale) in any way? If so, give dates and details. If not, what is the current schedule for disclosure/commercialization? [Example: *No disclosure outside of Crossroads has yet been made, but I would like to present a paper outlining the invention at a conference in three months. Current plans are to start contacting OEM customers regarding this invention during the next quarter. The product should be in alpha test in about four months.*]

No

**9. Inventorship:** Everyone contributing to the Invention should be listed as a possible inventor. If you are not sure whether someone qualifies as an inventor, describe what that person contributed to the Invention.

David

Lee

Signature of Person Preparing this Form: \_\_\_\_\_  
Name (printed) of Person Preparing this Form: David Lee  
Date Prepared: 11/29/99

Please forward both parts of this form to \_\_\_\_\_



Crossroads Systems, Inc.

INVENTION DISCLOSURE FORM  
PART TWO

Part Two is to be filled out whenever it is likely that Crossroads will seek a patent for an Invention. The information requested in Part Two arises largely from requirements of the U.S. Patent law. Of particular importance are the requirements that: i) the Invention has not been described in any published document more than one year before the patent application filing date; and ii) the Invention has not been used or known by the public, or on sale, more than one year before the patent application filing date. The law is clear in stating that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Patent Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability. In light of these legal requirements, please complete Part Two carefully and completely.

**1. Inventors' Information (for each inventor):**

Full Name: David Lee  
Home Address (Street, P.O. and County): P.O. Box 203805 Austin, TX  
Citizenship: USA

**2. Invention Dates:**

Invention first thought of on: September, 1999  
Date and present location of first written descriptions, drawings, or diagrams: November 1999  
Date:                 , 19      ; Location: Crossroads Systems, Inc. Austin, TX USA  
Invention first implemented on:                 , 19       (write N/A if invention has not yet been implemented)  
Prototype/sample program first completed on: November, 1999  
Prototype/sample program first tested on: November, 1999

**3. Disclosure Dates:**

Date and location of first description, showing, or demonstration of Invention, or prototype/product/program embodying it, to other Crossroads personnel is:  
Date:                 , 19        
Location: \_\_\_\_\_  
Circumstances: \_\_\_\_\_

Anticipated or actual date and location of first announcement, publication, description, or other disclosure of information relating to Invention is:  
Date:                 , 19        
Location: \_\_\_\_\_  
Circumstances: \_\_\_\_\_

Anticipated or actual date and location of first showing or demonstration of Invention, or prototype/product/program embodying it, to someone outside Crossroads is:  
Date:                 , 19        
Location: \_\_\_\_\_ Circumstances: \_\_\_\_\_

Please advise \_\_\_\_\_ immediately when a product containing the Invention is to be shown, described, or advertised to anyone outside of Crossroads, even on a confidential basis.  
**FAILURE TO DO SO MAY CAUSE FORFEITURE OF IMPORTANT PATENT RIGHTS.**

**4. Use of the Invention:** If the invention has ever been used commercially, even within Crossroads, please provide the details below. If you are not sure whether a use is commercial, please describe the circumstances of the use.

Date: \_\_\_\_\_, 19

Location: \_\_\_\_\_

Circumstances: \_\_\_\_\_

**5. Contracts Involving the Government or Other Companies:** Was the invention made during the course of your work on a U.S. Government contract or other contract between Crossroads and another company or individual?

YES      NO

If the invention, or any part of it, to be included in any materials (including proposals and products) furnished or to be furnished under contract to the U.S. Government, or another company or individual?

YES      NO

**6.6. Previous Solutions:** Briefly describe products and publications similar to the invention.

List those that you think are most similar to your Invention first. Include copies of any relevant written materials with this form. none

**7. Description of the Invention:** [If any of the information about the Invention has changed since you filled out Part One, please list the correct information below.] Describe the invention in detail below. Please provide an overall description, using separate pages if necessary, and include copies of lab notebooks, computer printouts, diagrams, and any other documents that may be useful in explaining the Invention. Describe your preferred embodiment of the Invention as well as any alternative ways of building and operating the Invention. In describing the Invention, note which elements you believe to be novel as well as those you think are conventional. (Attach the additional pages)

**8. Inventors(s):** All contributors must sign below. (Attach additional pages, if necessary.)

Signature: \_\_\_\_\_; Print Name: David Lee; Date: 12/16/99

Signature: \_\_\_\_\_; Print Name: \_\_\_\_\_; Date: \_\_\_\_\_

**9. Witnesses:** (Attach additional pages, if necessary)

(1) Date invention first explained to and understood by me: \_\_\_\_\_, 19

Signature: \_\_\_\_\_; (Print Name) \_\_\_\_\_; Date: \_\_\_\_\_

(2) Date invention first explained to and understood by me: \_\_\_\_\_, 19

Signature: \_\_\_\_\_; (Print Name) \_\_\_\_\_; Date: \_\_\_\_\_

EACH ADDITIONAL PAGE SHOULD BE SIGNED AND DATED AT THE BOTTOM  
BY THE INVENTOR(S) AND WITNESS(ES).